



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,304	07/11/2005	Ian Revie	1781-0010	6005
7590 10/26/2005			EXAMINER	
Paul J Maginot Maginot Moore & Beck Bank One Center Tower 111 Monument Circle Suite 3000 Indianapolis, IN 46204-5115			FLANAGAN, BEVERLY MEINDL	
			ART UNIT	PAPER NUMBER
			3739	
DATE MAILED: 10/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/505,304

Applicant(s)

REVIE ET AL.

Examiner

Beverly M. Flanagan

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 5 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.


**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
BEVERLY M. FLANAGAN  
PRIMARY EXAMINER

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement filed August 20, 2004 has been made of record and the references cited therein have been considered by the examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillies et al. (U.S. Patent No. 6,272,370).

**In regard to claims 1, 2, 9 and 10**, Gillies et al. teach a microcatheter 1 comprised of an elongate shaft with a plurality of MR-visible markers 6 disposed at the distal end to provide easily identifiable reference points for trackability and localization under MR imaging and X-ray fluoroscopy (see Figure 1 and col. 25, lines 39-43). The markers 6 can be formed of radioopaque materials, such as gold, platinum or tantalum, which are more reflective than the copolymer of the shaft 2 of the microcatheter 1 (see col. 25, lines 10-53). Inherent in the disclosure of the use of an MR or x-ray imaging device is the use of at least two receiving devices spaced apart for receiving stereoscopic signals from the markers 6 and a dataprocessor for analyzing the signal from the markers 6 and generating information relating to the position and orientation of

the microcatheter 1. Also inherent in the disclosure of the use of an MR or x-ray imaging device are the method steps of locating the axis of the shaft 2 of the microcatheter 1 and locating the center line of each marker and as well as identifying 3 generally rectangular areas which represent the markers 6, determining the location of a line on each of the rectangular areas and determining the angle between the lines on adjacent ones of the rectangles (all done within or by the processor that comprises part of the MR or x-ray imaging device). **In regard to claim 6**, Figure 1 shows that the planes defined by the axially spaced edges of each marker 6 are parallel to one another and perpendicular to the axis of the shaft 2.

Claims 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillies et al. (U.S. Patent No. 6,272,370) in view of Ben-Haim (U.S. Patent No. 6,203,493).

**In regard to claims 3, 4 and 7**, Gillies et al. teach two markers 6 on the microcatheter 1 (see Figure 1). However, Ben-Haim discloses a similar tracking device for an endoscope comprised of a sheath 20 having a plurality of sensors 22 spaced along the axis of the endoscope (see Figure 1). Furthermore, duplicating the components of a prior art device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the microcatheter 1 with at least three markers 6, in the manner disclosed by Ben-Haim. Furthermore, it would have been obvious for one of ordinary skill in the art at the time

Art Unit: 3739

the invention was made to provide the microcatheter 1 of Gillies et al. with a sheath containing the markers 6, in the manner disclosed by Ben-Haim, as Ben-Haim demonstrates that sheaths containing radio-opaque markers for placement over an surgical device are well known in the art.


***Allowable Subject Matter***

Claims 5 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beverly M. Flanagan whose telephone number is (571) 272-4766. The examiner can normally be reached on Mondays, Tuesdays and Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Beverly M. Flanagan  
Primary Examiner  
Art Unit 3739

\*\*\*